Chapter 10
Digital Divide in Latin American Higher Education:
Challenges and Obstacles in the Face of Artificial Intelligence

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ABSTRACT

In recent years, technological and digital advancements have profoundly transformed various fields of computer science, as well as human endeavors and diverse industries. Disruptive technologies have generated a significant impact on the social and productive spheres globally. Among these, cloud computing, cybe.rsecurity, and 5G technology stand out, with the growth of the Artificial Intelligence (AI) market being particularly relevant and the subject of this chapter. AI's pervasive influence on education has exacerbated the digital divide, which itself reflects existing societal inequalities—a persistent problem not only in education but also across various other societal domains. The interplay of several factors, including access to technology, existing infrastructure, educational training, and the level of technological literacy, alongside inequalities associated with geographical location and current socioeconomic conditions, plays a crucial role in this contex.

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INTRODUCTION

The transformative wave of digitalization has permeated all facets of society, and higher education has not remained untouched. However, in Latin America, the persistent digital divide stands as a significant impediment to the equitable adoption of emerging technologies, particularly Artificial Intelligence (AI), within the educational sphere. The genesis of AI can be traced back to the Turing Test, which simulated an imitation game involving a computer, a human informant, and an analyzing human. This "evaluator" had to discern whether the questions were posed by a human or a computer. Thus, a game sparked the initial inquiry into AI and the nascent idea of questioning whether a computer could develop human-like intelligence (Salazar, 2020).

Currently, according to Rouhiainen (2018), "AI is the ability of machines to use algorithms, learn from data, and use what they have learned in decision-making just as a human would" (p. 17). Additionally, and broadly, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2025) defines AI as machines that emulate human intelligence, encompassing perception, learning, reasoning, problem-solving, linguistic interaction, and creativity.

The foregoing definitions underscore that AI has evolved not only theoretically but also practically, continually transforming over time. Its development progressively adapts to the technological and digital advancements of each era and the dynamics of humanity, leading to improvements in its technical sophistication and an expansion of its functional capabilities. Consequently, given the burgeoning prominence and imminent adoption of AI, the Organisation for Economic Co-operation and Development (OECD) advocates for the promotion of its responsible governance. Indeed, according to the OECD (2024), the established principles include: 1. Inclusive growth, sustainable development, and well-being. 2. Respect for the rule of law, human rights, and democratic values, including equity and privacy. 3. Transparency and explainability. 4. Robustness, security, and safety. 5. Accountability.

Since 2019, 42 nations have adopted the OECD's recommendations, which, as noted, foster innovative, trustworthy AI that respects human rights and democratic values. In light of this, the Inter-American Development Bank (IDB) developed the document "fAIr LAC: Ethical and Responsible Adoption of AI in Latin America and the Caribbean," which describes the fAIr LAC initiative. This initiative "seeks to promote the responsible adoption of AI to improve the provision of social services and create development opportunities in order to reduce gaps and mitigate growing social inequality" (Pombo, Cabrol, González Alarcón, & Sánchez Ávalos, 2020).

In the current regulatory landscape, where international organizations endeavor to establish normative frameworks, Artificial Intelligence (AI) emerges as a tool with unique potential to foster equal opportunities and elevate the quality of life in our